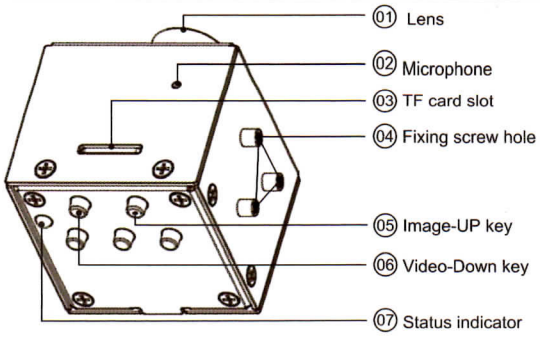
HD Aerial Photographic Instrument

Before use, please read completely this manual.
Thank you for purchasing this product.

I. Functional Illustrations



Safety Notice

Warning

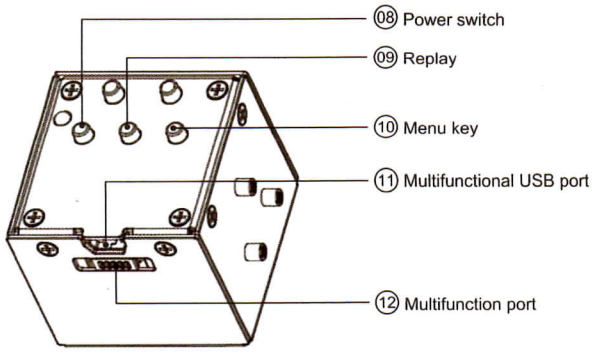
⚠ The magnetic field of certain frequency may affect the image and sound of this instrument.

⚠ If data transmission interrupts (fails) due to static or electromagnetism, be sure to disconnect or restart the application program and reconnect the communication cable (USB, etc.).

⚠ Do not install or place this instrument in the closed space such as cabinet, closet and so on in order to avoid fire due to overheat.

⚠ Do not install or place this instrument on the flammable or explosive article to avoid such risks as fire, explosion and so on due to overheat.

⚠ Do not place this instrument near for example open fire.



Notices for the use of this instrument:

⚠ 1. Before use, please try taking a photo or video firstly to make sure this instrument can work normally.

⚠ 2. As this instrument is not dustproof or waterproof, be careful when using it.

⚠ 3. Do not place this instrument in a humid environment. The entry of moisture into this instrument may damage it and it may not be repaired in some circumstances.

⚠ 4. Do not use this instrument near the place with strong wireless waves or radioactive rays; otherwise, it cannot be used normally.

⚠ 5. Do not point the camera of this instrument against sunshine or strong ray, otherwise failure may be caused.

Functions of Components

Power button:

1. Press the power button to switch on the instrument and wait for a moment to enter standby status.
2. Press this button again about 2s to switch it off.

Menu button

1.In standby state, press this button 3s to enter the menu setup state.

2.In menu setup state, press this button shortly to browse the option; in the setup state, press this button 3s to back to the previous menu and continue pressing it to exit from the menu.

3.In replay state, press this button shortly to stop; in file browse state, press this button shortly to enter the file operation menu and long to exit.

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Main unit

Power cord

Multifunctional connection cable

AV connection cable

USB data cable

User manual

Replay button

1. In standby state, press this button shortly to enter the replay state; in the replay process, you may <Play/Pause>.
2. In menu setup state, as <OK> key.

Image button

1. In standby state, as image key.
2. In menu setup state, as <UP> key.

Video button

1. In standby state, as video key.
2. In menu setup state, as <DOWN> key.

Multifunctional USB port

1. Used to connect to a PC for data transmission.
2. AV output.

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3. IR signal input.

Status indicator

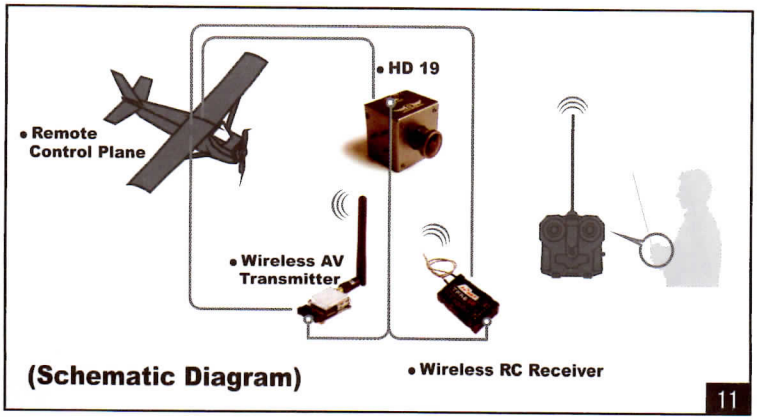
1. In standby state, normally ON, red.
2. In video state, quickly flashing.
3. In image state, slowly flashing.

Multifunctional port

1. Power input
2. AV output
3. Remote data input

II. Aerial Photograph Connection

1. Firstly fix the main unit and the transmission module onto the model airplane.
2. Connect the main unit and the transmission module properly with the multifunctional connection cable.
(When the main unit is on, you may transmit video signals via the wireless transmission module.)
3. Connect the other connector of the multifunctional connection cable to the data output path of the wireless RC receiver.
(In remote control state, when the remote control signals received by the instrument reach certain value, it will have automatic video recording; when the signal returns to the original state, the video recording will stop.)
4. After the installation is over, press the power key to power on the main unit and press the video key, then the main unit will start recording videos; the default is the highest setup of images and videos. (To set the main unit, connect it to an external display.)



(Schematic Diagram)

III. Connect to Display for Setup

1. Via the USB port, you may connect the main unit to an external display through which you may set the main unit and have a replay.
2. Press the M key long to enter the menu and shortly to switch to the desired menu list for setup. To set one item, press the UP/DOWN key to choose it. After choosing, press the OK key to enter and set it. After that, press the OK key to confirm and back to the previous level.
3. If setup is over, press the M key to back to standby state.

Video Menu Setup

Item	System	Functional description
Resolution	1080p	16:9, full HD resolution, 1920×1080p 30 frames/s

Resolution	720pH	16:9, max. visible area, 1280×720p 60 frames/s.
	720p	16:9, max. visible area, 1280×720p 30 frames/s.
Quality	H	High video quality
	M	Intermediate video quality
	L	Low video quality
Metering mode		Average test mode
		Center photometry mode
Video section	5、10、15、20、30min.	In continuous video recording, the video file will be saved as one file for such time and then one new file will be created to continue recording.
Time stamp	On/Off	When this setup is activated, date and time will be embedded on the upper left corner on the video.

Slow shooting	Off, frame/1s, 10s, 30s, 60s	Set the time interval to capture 1 frame.
loop recording	On/Off	When this function is activated, you may circularly use the memory card space to have continuous video recording; after the memory card is full, the system will automatically delete the earliest created file and continue recording.
Microphone	On/Off	After this function is activated, sound can be recorded synchronously with video recording.

Image Menu Setup

Items	Menu setup	Functional description
Photo pixel	5M	2592×1944
	3M	2048×1536

Continuous	3pcs	Take 3 photos continuously
	5pcs	Take 5 photos continuously
	10pcs	Take 10 photos continuously
Auto shooting	pcs/3s	Take 1 photo every other 3s.
	pcs/5s	Take 1 photo every other 5s.
	pcs/10s	Take 1 photo every other 10s.
	pcs/30s	Take 1 photo every other 30s.
	pcs/60s	Take 1 photo every other 60s.
Time watermark		When this setup is activated, date and time will be embedded on the upper left corner on the image.

System Menu Setup

Items	Menu setup	Functional description
Language	English	English
Date	2012-01-01	Set date.
Time	00:00	Set time in 24h system.
Auto screen off	Off, 30s, 60s, 120s	Set the time to automatically turn off the screen. Press any key to wake it up.
Auto power off	Off, 30s, 60s, 120s, 300s	Set automatic switch-off duration. When there is no operation, the power supply will be automatically turned off.
Motion detection	High, middle, low	Set the touch sensitivity
Light frequency	50Hz, 60Hz	Set according to the power grid frequency of the country to avoid interference

TV output	NTSC, PAL	Choose a proper video output format according to the video system in the country
OSD	on/off	off for FPV mode
Format		
Default settings		Remove the current user settings and restore the factory settings
Firmware update		See <Upgrade Program> for detailed operation method.

IV. Upgrade Program

1. Before program upgrading, make sure the external power supply is stable.
2. Please prepare the upgrade files and copy them onto the memory card (do not change their name freely) and insert the memory card with the upgrade files into the card slot on the side of the instrument body.
3. Switch on the instrument, then the system will automatically upgrade. After the

upgrading is over, the system will automatically switch off the instrument.
4. After the upgrading is over, the system will automatically delete the files for program upgrading.

V. Specifications

Video sensor:	1/2.5 CMOS
Effective pixel:	5.0 mega pixels
Lens:	Fixed focus, f=2.8mm, angle of view=170°
Exposure control:	Automatic;
White balance:	Automatic;
Photo:	JPEG,Pixel, 2,592×1,944;
Dynamic video:	H.264 compressed; 16:9 1920×1080 (30 frames/s); 4:3 1440×1080 (30 frames/s);

	16:9 1280×720 (60 frames/s); 16:9 1280×720 (60 frames/s);
Recording medium:	high-speed Micro SD card (TF card); Max. 32GB supported;
Multifunctional USB port:	AV output, USB2.0 high-speed communication port (compatible with standard MINI USB plug), DC input;
Multifunction port:	DC12V input, AV output, remote control input;
Dimensions:	Approx. 37x37x31mm L/W/T (not including the stand);
Weight:	Approx. 58g (not including memory card and battery);
Operating temperature:	-10℃-60℃;
USB power adapter:	5V/1.5A.